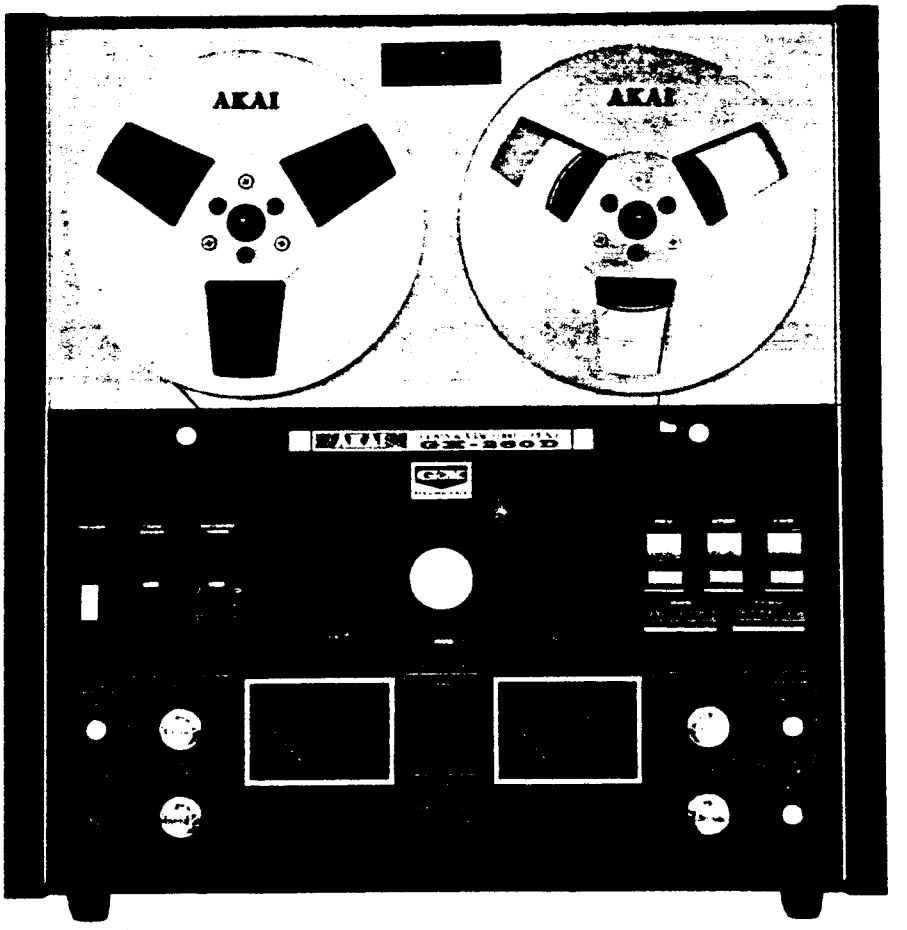
GX-260D

STEREO TAPE DECK

OPERATOR'S MANUAL



WARNING

To prevent fire or shock hazard, do not expose this appliance to rain or moisture.

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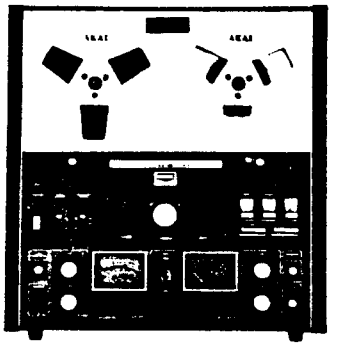

GX (glass & crystal ferrite) HEADS

Akai has equipped this model with its new and amazing GX Recording and Playback Heads to bring you unequalled open reel high fidelity sound. With the stable Center Capstan System, two combination Recording/Erase GX Heads, and two Playback GX Heads, this model displays an undistorted wide frequency response to 26,000 Hz.

With the GX Heads, a wider dynamic range and excellent signal to noise ratio are also attained. These accomplishments are due to head materials, superior processing technique and a "focused-field" recording system. The cores of these extraordinary heads are made of single crystal ferrite and are mounted and set in glass. The superior high range characteristics are contributable to the head gap which focuses the magnetic field into a sharp oblong radius. This focused-field recording system minimizes high frequency loss and eliminates undue equalization for perfect recording results.

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CEE, CSA, UL and LA Standard models are not equipped with a Voltage Selector and cycle conversion apparatus. Therefore, voltage and cycle conversion is not necessary. If your machine corresponds to any of these standards, please disregard all references to voltage and cycle adjustment throughout this manual.

CEE Models: 220V, 50Hz
CSA Models: 120V, 60Hz
UL, LA Models: 120V, 60Hz

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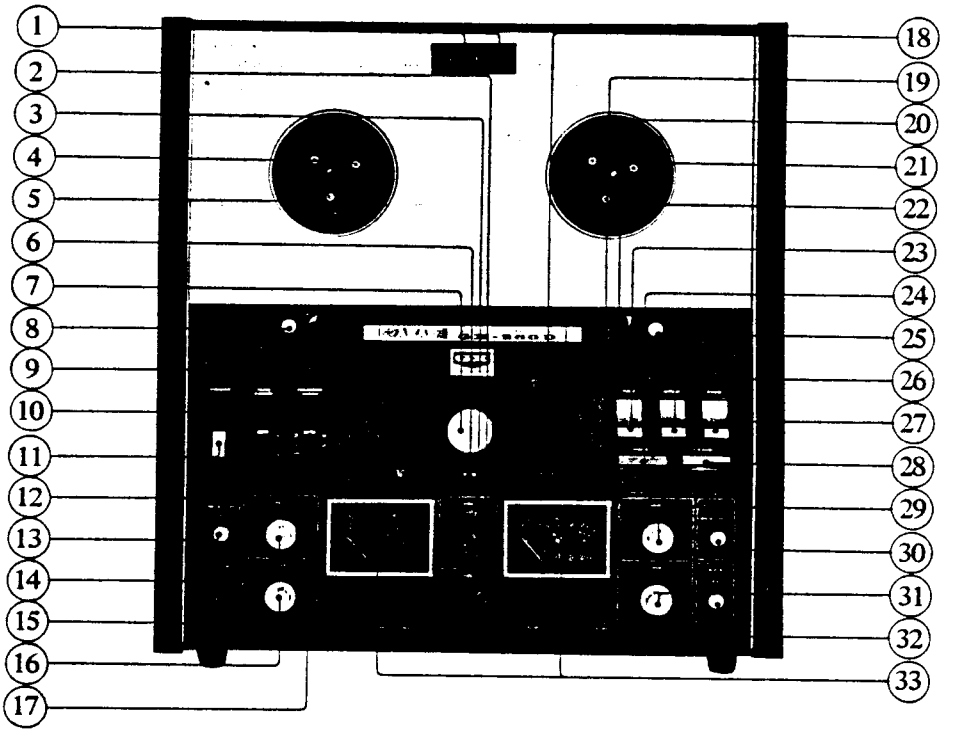
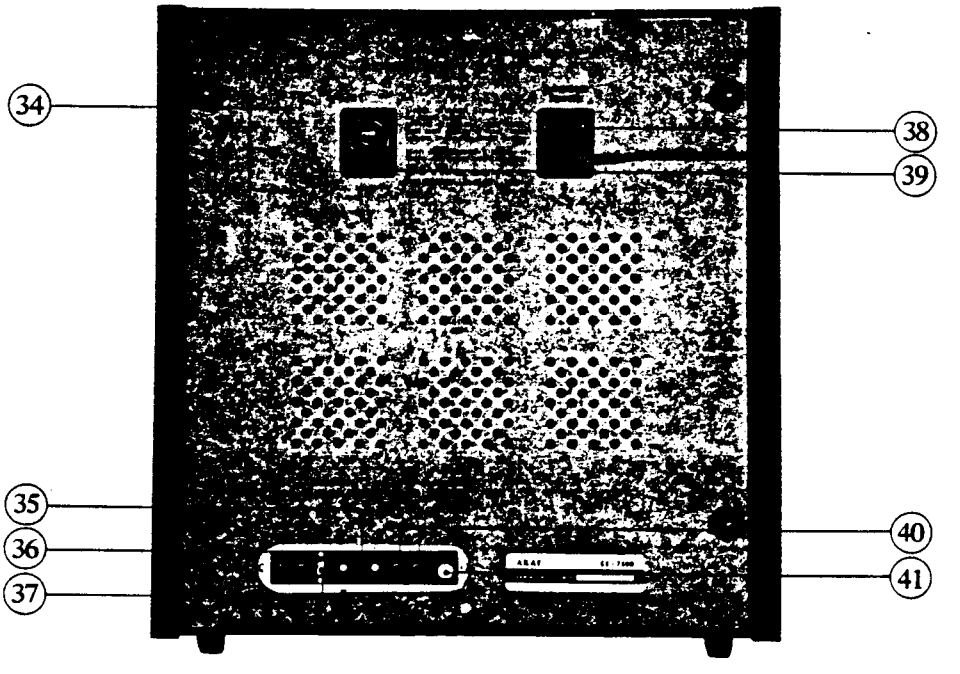
CONTROLS





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1. INDEX COUNTER & RESET BUTTON
2. MICROPHONE JACKS
3. RECORDING SAFETY BUTTONS
   Depress both buttons simultaneously for stereo recording, or individually for monaural recording.
4. REEL RETAINER
   To lock reel firmly into place pull tip of retainer on reel shaft outward and turn to left or right.
5. SUPPLY REEL TABLE
6. RECORDING INDICATOR LAMP
   Lights when Recording Safety Button(s) is depressed.
7. PINCH WHEEL
   Presses against Capstan to transport tape.
8. SENSING POLE/TENSION ARM
   Sensing Pole for reversing the direction of the tape automatically from normal to reverse direction.
9. HEAD COVER
   Houses from left, normal Recording/Erase and Playback, reverse Playback and Recording/Erase Heads.
10. DIRECTION INDICATOR LAMP
    Lights to indicate direction of motor rotation.
11. POWER SWITCH
12. SPEED SELECTOR SWITCH
    Set to 7-1/2 or 3-3/4(ips) according to desired tape speed. For high fidelity recording, the faster tape speed is recommended. The recording time using a 1800 ft. tape is as follows: STEREO: 3hrs at 3-3/4 ips; 1.5 hrs. at 7-1/2 ips. MONAURAL: 6 hrs. at 3-3/4 ips; 3 hrs. at 7-1/2 ips.
13. TAPE SELECTOR SWITCH
    Set to S.R.T. position when using Akai Super Range Tape or other make low noise tape, and to NORMAL position when using regular tape.
14. MICROPHONE RECORDING LEVEL CONTROL
    Controls microphone input level. Also use to adjust the input level when using the Din Jack for connection with an external amplifier.
15. HEADPHONE JACK
    Connect an 8 Ω impedance stereo headphones for monitoring or private headphone listening.
16. LINE RECORDING LEVEL CONTROL
17. REVERSE MODE SELECTOR SWITCH
    Please refer to AUTOMATIC / MANUAL REVERSE RECORDING (PLAYBACK) procedure.
18. DIRECTION INDICATOR LAMP
    Lights to indicate direction of motor rotation.
19. AUTOMATIC STOP LEVER
    Works to automatically stop tape travel at end of tape. When automatic stop is desired, be sure to thread tape under this lever. The machine will not operate if this lever is not at lifted position.
20. REEL RETAINER
    To lock reel firmly into place pull tip of retainer on reel shaft outward and turn to left or right.
21. TAKE-UP REEL TABLE
22. SENSING POLE
    For changing the direction of the tape from reverse to normal.
23. REVERSE BUTTON
    For effecting manual reverse playback.
24. REWIND BUTTON
    Rewinds tape at high speed.
25. TENSION ARM
26. STOP BUTTON
    Depress to stop tape travel.
27. FORWARD BUTTON
    Advances tape for recording or playback.
28. FAST FORWARD BUTTON
    Advances tape at high speed.
29. MICROPHONE RECORDING LEVEL CONTROL
    Controls microphone input level. Also use to adjust the input level when using the Din Jack for connection with an external amplifier.
30. MONITOR SELECTOR SWITCH
    To monitor program source, depress to SOURCE position. To monitor recorded signals or for playback, set to TAPE position.
31. LINE RECORDING LEVEL CONTROL
32. SOUND-ON-SOUND SWITCH
    Please refer to SOUND-ON-SOUND RECORDING procedure.
33. VU METERS
    Indicates recording or playback levels.
34. CYCLE CONVERSION SWITCHES (CEE, CSA, UL and LA models are not equipped with this facility).
    Set to 50 Hz or 60 Hz to correspond with area power source.
35. DIN JACK
    Enables inter-connection with external amplifier by use of a single Din connection cord. When using this jack for recording, the input level is adjusted with the Microphone Recording Level Control.
36. LINE INPUT JACKS
    Connects to outputs of external source.
37. DIN JACK INPUT SELECTOR SWITCH
    When using Din jack connection, if output level of external amplifier is high, set to HIGH position, and if low, set to LOW position.
38. A.C. OUTLET
    This unswitched A.C. Outlet is provided for extra convenience. It is not interlocked with the front panel power switch so that power is applied even with the unit turned off. 300 W maximum power input.
39. UNIVERSAL VOLTAGE SELECTOR & FUSE POST (CEE, CSA, UL and LA models are not equipped with this facility).
    Please refer to VOLTAGE & CYCLE CONVERSION procedure.
40. LINE OUTPUT JACKS
    Connects to inputs of external source.
41. LINE OUTPUT LEVEL CONTROL
    Adjust according to the input level of your amplifier.

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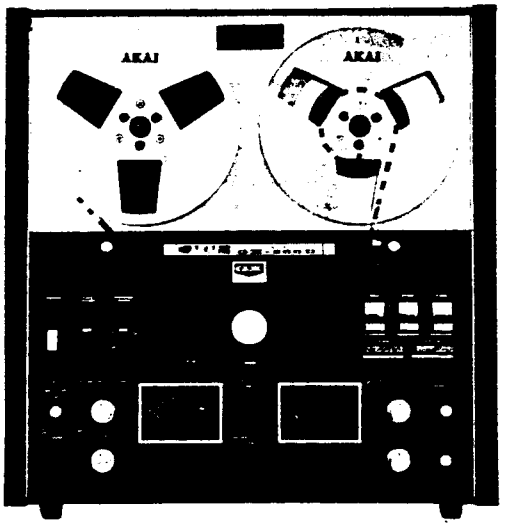
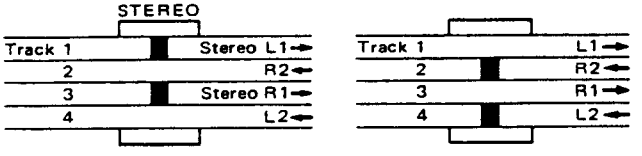
FOR BETTER RESULTS PLEASE READ THE FOLLOWING PRECAUTIONS

* Your machine requires constant voltage for optimum performance. The GX-260D is equipped with a Universal Voltage Selector and cycle conversion apparatuses. Voltage and cycles are preset at the factory according to destination. However, you are requested to confirm setting before attempting operation and if necessary, readjust as indicated on page 14 of this manual. If your local power source is unkonwn, please inquire at your nearest electric company for correct voltage and cycles.
* As dirty heads and magnetized heads become the source of loss of sound, distortion, sound drop-out, and other recording and playback failures, the heads must be kept clean and demagnetized at all times.
* Do not place anything on top of your machine which will obstruct the ventilator.
* Place machine on a flat horizontal surface and operate either horizontally or vertically.
* If the sound sources are so far away from the microphones that the input level controls must be turned up to maximum, some hum or noise will inevitably be recorded. A test recording is recommended before attempting a final recording.
* Use good quality tapes. New tape gives best results.
* As tapes which have not been used for a period of time may have become sticky, run once before using.
* Always store tapes in a cool, dry place.

Should there be a problem with your machine, write down the model and serial numbers and all pertinent data regarding warranty coverage as well as a clear description of the existing trouble and contact your nearest authorized Akai Service Station or the Service Department of Akai Company, Tokyo, Japan.





HOW TO LOAD A MAGNETIC TAPE

For loading a magnetic tape, please proceed as follows:

1. Place a full reel of tape on the Supply Reel Table and an empty reel on the Take-Up Reel Table.
2. Lock reel into place pulling tip of retainer on reel shaft outward and turning to left or right.
3. Unwind about a 75 cm length of tape from the supply reel and then thread tape properly as shown by the dotted lines in the figure.
4. Insert end of tape in slot of empty reel and wind tape around the reel hub two or three times.
5. Continue winding tape onto take-up reel until all tape slack has been taken up.

* Be sure to thread the tape under the Automatic Stop Lever located at the right side of the head block. The machine will not operate if this lever is not at lifted position.

4-TRACK STEREO RECORDING (PLAYBACK) SYSTEM

Stereo recording requires the simultaneous use of two tracks. For stereo operation, depress both Recording Safety Buttons. The first stereo recording takes place on tracks 1 and 3, and the second on tracks 2 and 4 after the machine has been set to reverse recording mode.

Stereo playback also requires the simultaneous use of two tracks. The first stereo playback takes place on tracks 1 and 3, and the second on tracks 2 and 4 after the machine has been set to reverse playback mode.

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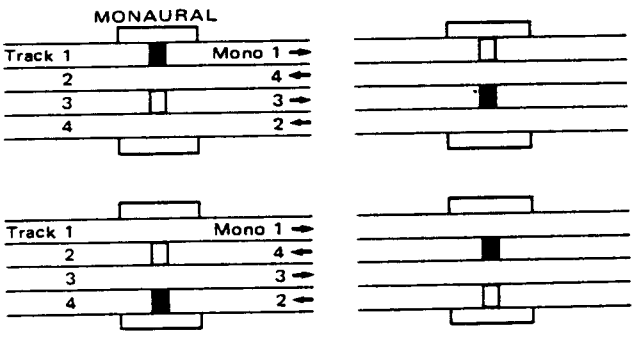

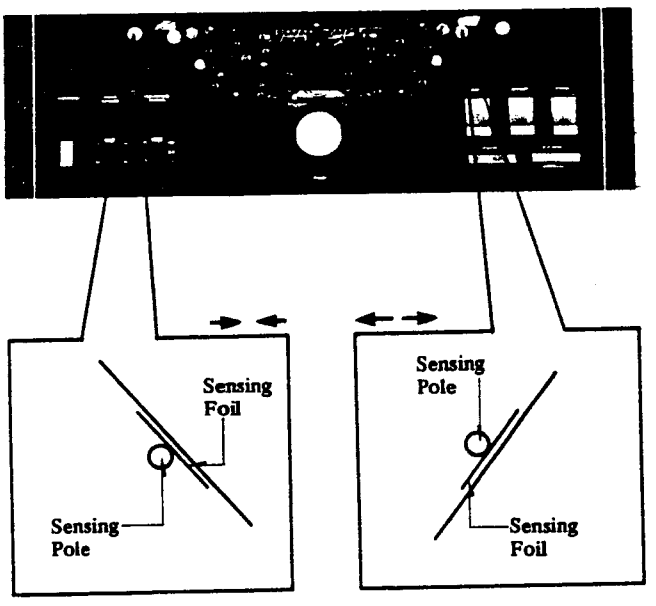

4-TRACK MONAURAL RECORDING (PLAYBACK) SYSTEM

4-track monaural recording sequence is 1-4-3-2. For monaural operation, depress LEFT Recording Safety Button. The first recording takes place on track 1 and the second on track 4 after the machine has been set to reverse recording mode. For recording on tracks 3 and 2, depress RIGHT Recording Safety Button. The third recording takes place on track 3 and the fourth on track 2 after the recorder has been set to reverse recording mode.

4-track monaural playback sequence is 1-4-3-2 and is effected without depressing the Recording Safety Buttons.

* As the model records in reverse direction, it is not necessary to invert reels.

AUTOMATIC & MANUAL REVERSE RECORDING (PLAYBACK)

For automatic reverse recording or playback (from normal to reverse direction), affix about a 2.5 cm (1") long piece of metallic sensing foil to the outside of the magnetic tape at desired reversing point. If continuous reverse between two points is desired, affix another piece of sensing foil to the inside of the magnetic tape at desired reversing point. As the sensing foil passes the sensing poles, reverse is effected depending upon position of the Reverse Mode Selector Switch.

CONTINUOUS REVERSE

Set Reverse Mode Selector Switch to CONT REV position. Recording (playback) will continue in both directions until the Stop Button is depressed. Recommended for effecting continuous playback.

ONE CYCLE REVERSE

Set Reverse Mode Selector Switch to REV position. The tape will record (playback) one forward and reverse cycle and then automatically stop.

NON-REVERSE

Set Reverse Mode Selector Switch to NON REV position. Recording (playback) will be effected in one direction only. At this setting, one-way recording (playback) will be effected whether or not sensing foil is applied to the magnetic tape.

* When manual operation of any of these functions is desired, operate the Manual Reverse Button.

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USE LOW NOISE TAPE FOR BETTER RECORDING

Depress the Tape Selector Switch located on front panel when using Akai Super Range Tape or other make low noise tape for recording. This will bring out the maximum response of low noise tape and work to change the recording equalization according to the tape. Although this model exhibits excellent frequency response with regular tape, this is further extended with the use of low noise tape.

* Set to S.R.T. position only when using low noise tapes.

FOR BETTER RECORDING RESULTS

With the machine set to recording mode, the input level is registered on the VU Meters, but the recording level can be more precisely set by adjusting the input level controls while monitoring the input signals through stereo headphones. Set Monitor Selector Switch to SOURCE position and adjust input level. For recording with the least possible distortion, keep the recording level as high as possible within the black part of the VU Meter upper scale.

SOUND MONITORING

For monitoring sound source during recording, set Monitor Selector Switch to SOURCE position. If this switch is set to TAPE position, the recorded signals can be monitored as the tape passes the playback head. Therefore, dual monitoring can be accomplished for a more professional recording. When headphones are used for private listening, this switch must be set to TAPE position.

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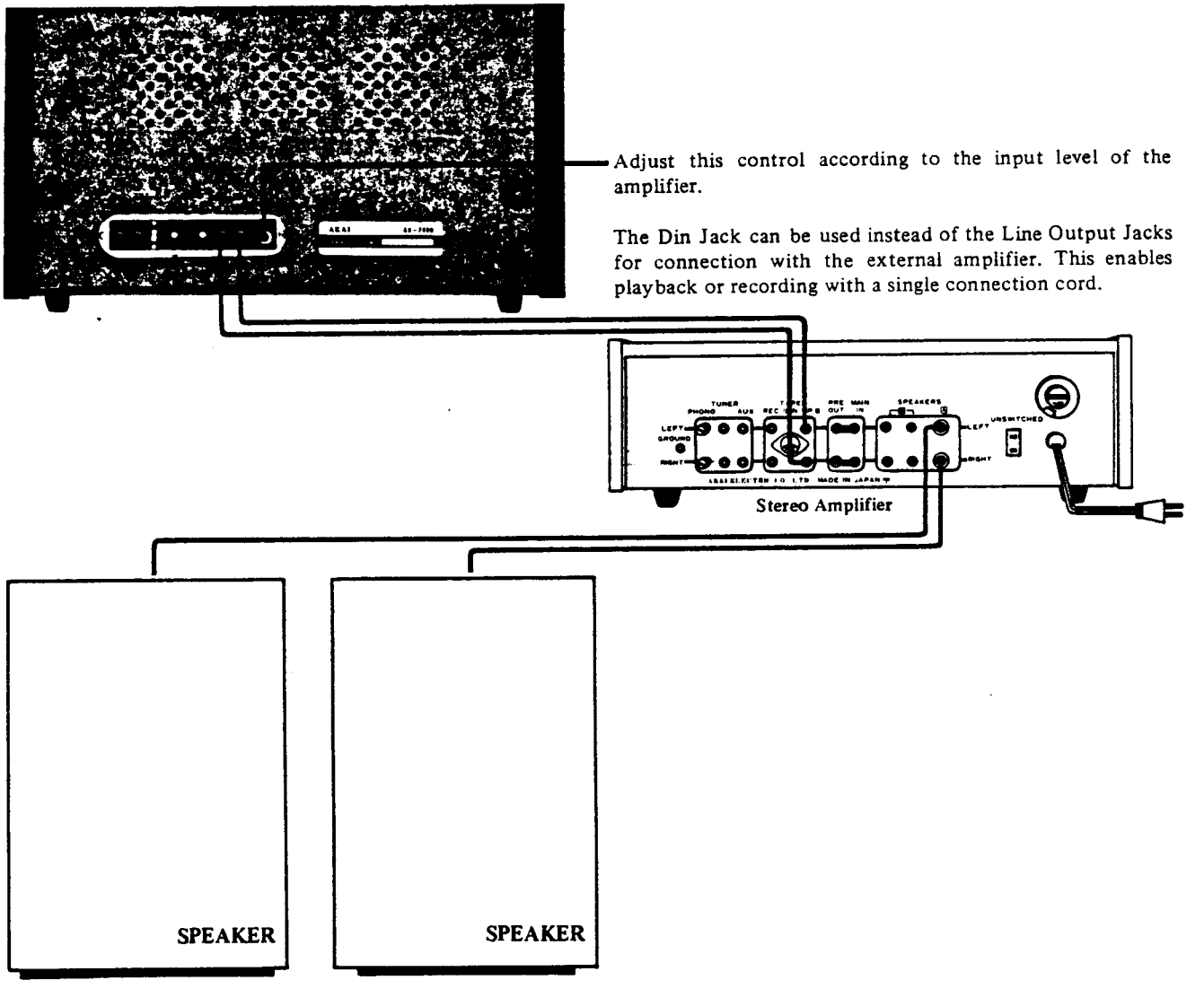
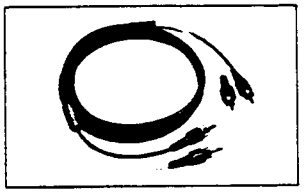
CONNECTIONS FOR PLAYBACK

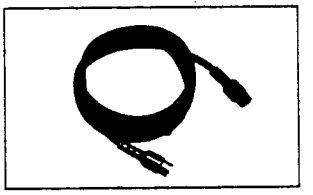


Adjust this control according to the input level of the amplifier.

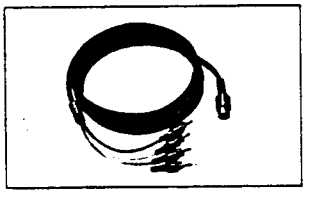
The Din Jack can be used instead of the Line Output Jacks for connection with the external amplifier. This enables playback or recording with a single connection cord.



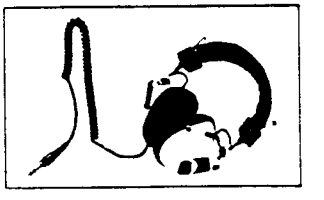
RCA/RCA
Connection Cord



DIN/DIN
Connection Cord



DIN/RCA
Connection Cord



For private headphone listening, use stereo headphones of 8 Ω impedance.

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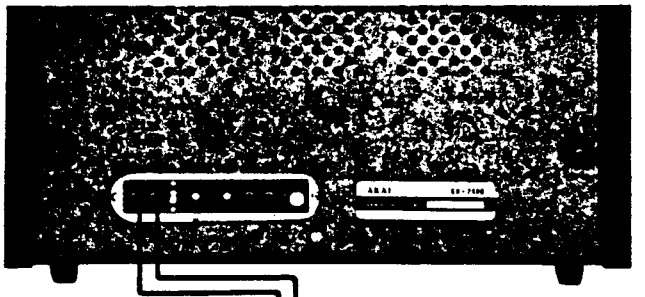
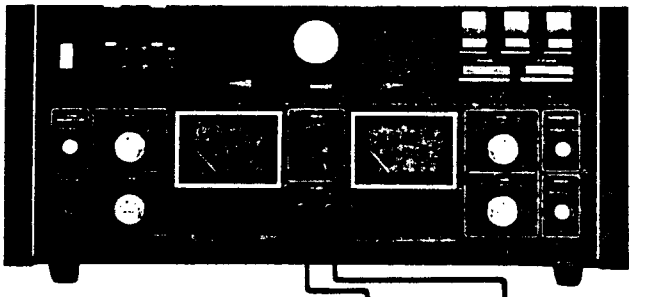
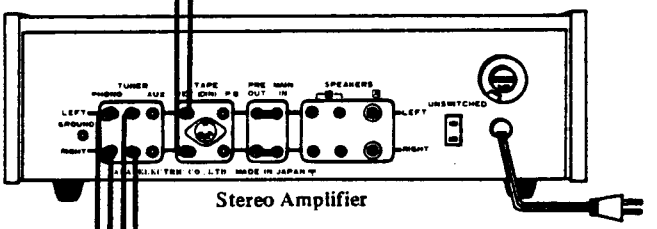
CONNECTIONS FOR RECORDING

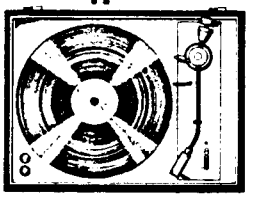




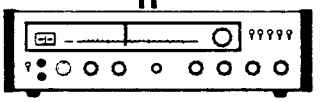
The Din Jack can be used instead of the Line Input Jacks for connection with the external amplifier. This enables playback or recording with a single connection cord. In this case, the input level is adjusted with the Microphone Recording Level Controls.



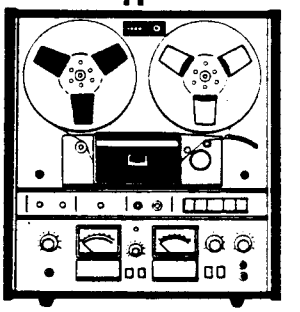
Stereo Amplifier



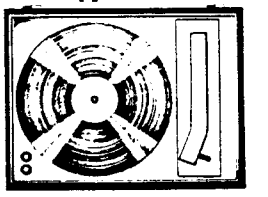
Magnetic cartridge turntable



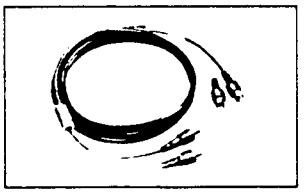
Stereo tuner



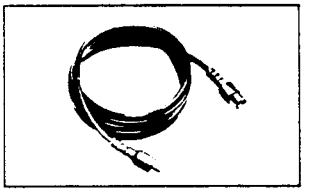
Stereo tape deck or recorder. Do not make Din-Din connection.



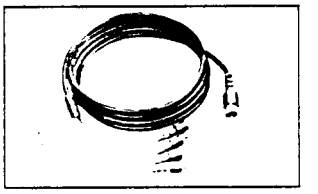
Crystal or ceramic cartridge turntable



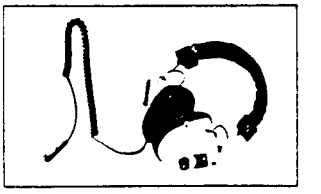
RCA/RCA
Connection Cord



DIN/DIN
Connection Cord



DIN/RCA
Connection Cord



For monitoring use stereo headphones of 8 Ω impedance.

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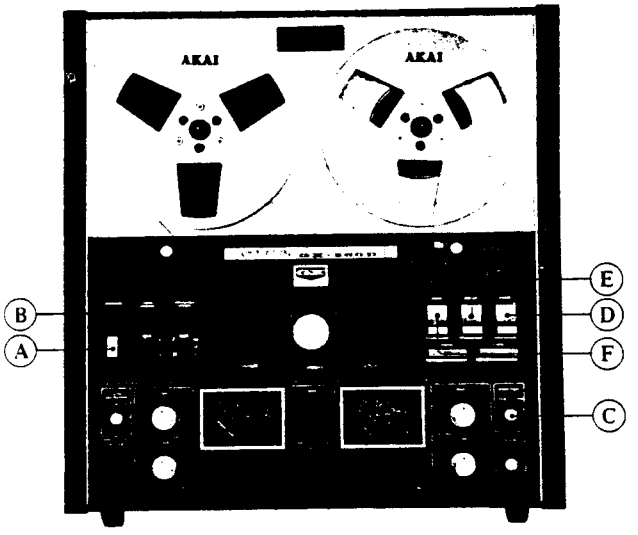

PLAYBACK

Make necessary connections as shown in CONNECTIONS FOR PLAYBACK, and read the operating precautions on page 4 before beginning operation. Then, load a pre-recorded tape following the instructions on page 4.

STEREO PLAYBACK

1. Connect power cord and turn on Power Switch (A).
2. Select desired speed with Speed Selector Switch (B).
3. Set Monitor Selector Switch (C) to TAPE position.
4. Depress Forward Button (D) to begin playback.
5. Adjust external amplifier controls. The rear panel Line Output Level Control must be adjusted according to the input level of the external amplifier.
6. To stop tape travel during playback, depress Stop Button (E).
7. For reverse playback depress Reverse Button (F).

MONAURAL PLAYBACK

Monaural playback is effected in the same way as stereo playback. However, if recordings have been made on both channels of the tape, for monaural playback adjust balance control of the external amplifier so that only the sound of the desired channel is audible.

* Monaural headphone listening cannot be accomplished if different monaural recordings have been made on both the left and right channels of the tape.

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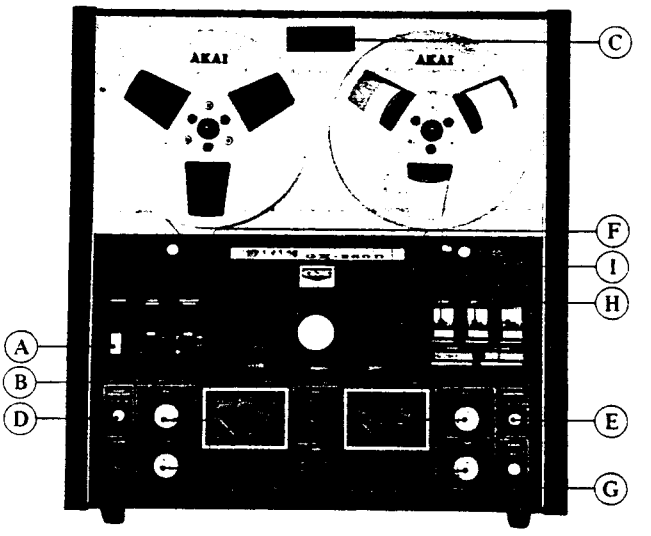
RECORDING



Make necessary program source connection to the appropriate inputs of this model as shown in CONNECTIONS FOR RECORDING, and read the operating instruction on page 4 before beginning operation. Then, load a tape following the instructions on page 4.

STEREO RECORDING

1. Connect power cord and turn on Power Switch (A).
2. Select desired speed with Speed Selector Switch (B).
3. With Reset Button (C), set Index Counter to "0000". This Index Counter provides an easy reference for locating positions on the tape.
4. Set Tape Selector Switch (D) to proper position. S.R.T. position is for Akai Super Range Tape or other make low noise tape.
5. Set Monitor Selector Switch (E) to SOURCE position.
6. Adjust and balance input level with corresponding Recording Level Controls (F) while observing VU Meters. Normal recording should not exceed zero VU level on either meter.
7. When an optimum recording level has been determined, while holding both left and right Recording Safety Buttons (G) at depressed position, depress Forward Button to begin recording. The Recording Indicator Lamp will light to indicate recording mode.
8. Depress Stop Button (H) to stop recording.

* For recording on reverse side, while holding Recording Safety Buttons at depressed position, depress Reverse Button (I).

MONAURAL RECORDING

For monaural recording, substitute the following steps for steps 6 and 7 of stereo recording procedure.

Tracks 1 & 4

Only the left channel is used for monaural recording on tracks 1 and 4.

6. Adjust and balance input level with corresponding left Recording Level Control while observing left VU Meter. Normal recording should not exceed zero VU.
7. When an optimum recording level has been determined, while holding the left Recording Safety Button at depressed position, depress Forward Button to begin recording. The Recording Indicator Lamp will light to indicate recording mode.

Track 3 & 2

Only the right channel is used for monaural recording on tracks 3 and 2.

6. Adjust and balance input level with corresponding right Recording Level Control while observing right VU Meter. Normal recording should not exceed zero VU.
7. When an optimum recording level has been determined, while holding the right Recording Safety Button at depressed position, depress Forward Button to begin recording. The Recording Indicator Lamp will light to indicate recording mode.

* The same monaural source can also be recorded simultaneously on both left and right channels by depressing the left and right Recording Safety Buttons simultaneously.

ECHO EFFECT TO DOUBLE YOUR PLEASURE

When echo effect is desired, substitute the following step for step 6 of Stereo Recording procedure.

6. Adjust and balance input level with corresponding Recording Level Controls (F) (if microphones are used for recording adjust Microphone and Line Recording Level Controls; if line connections are used, adjust Line Recording Level Controls) while observing VU Meters. Normal recording should not exceed zero VU level on either meter. Depress Sound-On-Sound Switch.

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SOUND-ON-SOUND RECORDING

For transfer of previously recorded material from one track to another, accumulating as many individual recordings on a single track as is desired. Use for fun or professional compilations.

First Recording

1. Confirm that there are no connections to the Input Jacks and turn all input level controls to minimum.
2. Plug in microphone to left Microphone Jack.
3. Depress Monitor Selector Switch to SOURCE position.
4. Adjust left Microphone Recording Level Control while observing the left VU Meter.
5. Depress Reset Button and set Index Counter to "0000".
6. While holding left Recording Safety Button at depressed position, depress Forward Button to begin first recording.
7. When the recording is completed, rewind tape to starting point.

Second Recording

8. Confirm that the Monitor Selector Switch is at SOURCE position and set Sound-On-Sound Switch to ON position.
9. Plug in microphone to right Microphone Jack.
10. Connect stereo headphones to Stereo Headphone Jack for monitoring the first recording.
11. Adjust right Microphone Recording Level Control while observing the right VU Meter.
12. Turn up right Line Recording Level Control to same position as right Microphone Recording Level Control.
13. While holding right Recording Safety Button at depressed position, depress Forward Button to begin second recording.

* As the second recording is being made, the first recording is monitored through the stereo headphones. The two recordings will be completely merged on the right channel tracks.
* Third and subsequent recordings are made in the same manner as the second by switching the Recording Safety Buttons. Note that the Line Recording Level Control not in immediate use must be set to minimum during recording. For instance, when making the second recording, the left Line Recording Level Control must be set to minimum and the right control to maximum or to the same level as the microphone input. When effecting the third recording, the right Line Recording Level Control must be set to minimum and the left Line Recording Level Control to desired level, and so on.
* For playback, set Monitor Selector Switch to TAPE position and adjust amplifier balance control so that only the sound from the last recorded channel is heard.

SOUND-WITH-SOUND RECORDING

Sound-with-sound recording is accomplished in the same way as Sound-On-Sound except that instead of transferring from one track to another, the sound on track 1-4 is monitored through headphones while the second recording is made on track 3-2. This feature is especially convenient for teacher/student repetition and comparison (teacher's voice on track 1, and student's voice on track 3). For sound-with-sound recording, follow Sound-On-Sound Recording through step 7 and proceed as follows:

8. Plug in microphone to right Microphone Jack.
9. Connect stereo headphones to Stereo Headphone Jack for monitoring the first recording.
10. Adjust right Microphone Recording Level Control while observing the right VU Meter.
11. Set Monitor Selector Switch to TAPE position.
12. While holding right Recording Safety Button at depressed position, depress Forward Button to begin second recording.
13. When recording is completed, rewind tape, playback and compare. The second recording can be re-recorded as many times as is necessary until perfection is attained.

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SOUND MIXING

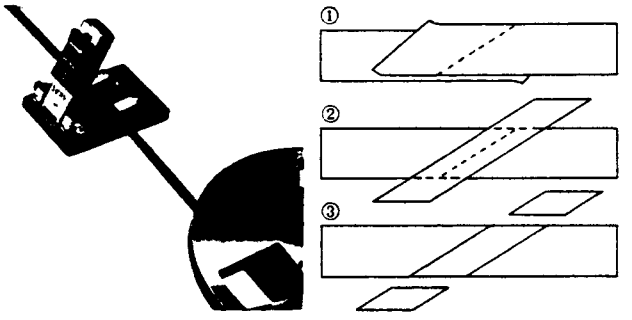
Another important feature of this model is the built-in microphone-line mixing circuit. Independent line and microphone recording level controls and input jacks enable signals from microphones and from line sources to be blended and recorded simultaneously on the tape.
Connect microphones to the Microphone Jacks and connect desired source to the Line Input Jacks, and follow the procedure outlined below.

1. Connect power cord and turn on Power Switch.
2. Select desired speed with Speed Selector Switch.
3. With Reset Button, set Index Counter to "0000". This Index Counter provides an easy reference for locating positions on the tape.
4. Set Tape Selector Switch to proper position. S.R.T. position is for Akai Super Range Tape or other make low noise tape.
5. Set Monitor Selector Switch to SOURCE position.
6. Adjust and balance microphone input level with Microphone Recording Level Controls and line input level with Line Recording Level Controls while observing VU Meters. Normal recording should not exceed zero VU level on either meter.
7. When an optimum recording level has been determined, while holding both left and right Recording Safety Buttons at depressed position, depress Forward Button to begin recording. The Recording Indicator Lamp will light to indicate recording mode.
8. Depress Stop Button to stop recording.

TAPE ERASING

Any signals previously recorded on the tape will be automatically erased as a new recording is made. For erasing only, thread tape and set machine to recording mode. No plugs should be connected to the input jacks and the input level controls should be kept at minimum. For quick and complete erasure, a bulk tape eraser is recommended.

* Be sure to depress the proper Track Selector Switch(es). If both switches are depressed together, both the left and right channels will be erased.



TAPE SPLICING & EDITING

Cut tape diagonally with an overlap so that the ends are lined up. Cutting tape in the diagonal eliminates detection of the splice in recording. Cover aligned ends with splicing tape, exerting pressure to secure ends evenly. Trim off excess splicing tape. Cutting into magnetic tape very slightly will eliminate the possibility of a sticky splice. Splicing using scissors requires skillful work. For smooth and easy splicing, Akai Tape Splicer AS-3 is highly recommended.

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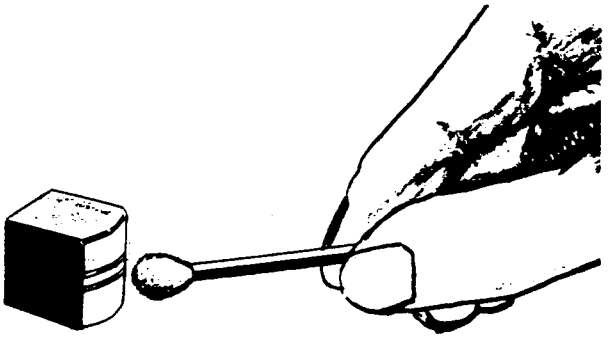
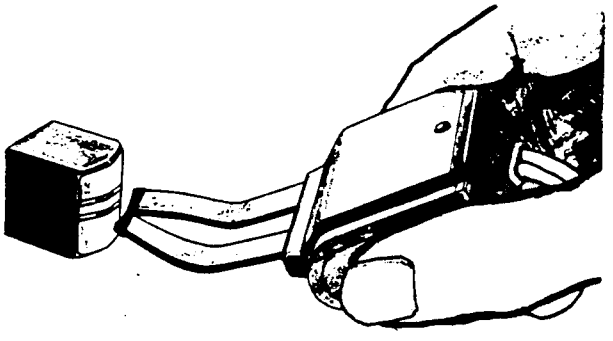


HEADS SHOULD ALWAYS BE KEPT CLEAN

The GX Heads do not normally require cleaning. However, if old tapes or tapes which have been spliced are used, head cleaning is recommended. Clean by rubbing the entire head surface (do not scratch) with a swab stick which has been dipped in Akai cleaning fluid from Akai Head Cleaning Kit HC-500.



HEAD DEMAGNETIZING

The prolonged use of the machine will gradually build up residual magnetism on the heads. The effect of magnetization is that it causes considerable drop in the highs and introduces noise into the recordings. It is, therefore, recommended that head demagnetizing be performed periodically. This can be accomplished with a bulk head demagnetizer by bringing it close to the heads and making several circulating motions over all head surface areas as well as the head housing.

* Be sure to turn off the power of the entire unit prior to demagnetizing the heads.
* Do not use magnetized tools in the vicinity of the heads and VU Meters.
* Please read the demagnetizer handling instructions carefully.

PINCH WHEEL & CAPSTAN CLEANING

If foreign matter is allowed to accumulate on the Pinch Wheel and Capstan, these particles will come off on the tape, causing deterioration of sound quality. Oil adhering to the capstan also causes irregularity in tape transport. It is, therefore, recommended that these parts be wiped clean occasionally. For Pinch Wheel and Capstan cleaning use Akai Head Cleaning Kit HC-500, or, if this is not available, use alcohol.

* Do not use chemicals such as chlorothane, etc., as the rubber parts will deteriorate.

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TECHNICAL DATA

Track System	4-track 2-channel stereo/monaural system
Reel Capacity	Up to 7″ reel
Tape Speed	7-1/2 and 3-3/4 ips (±1%)
Wow & Flutter	Less than 0.06% WRMS at 7-1/2 ips Less than 0.1% WRMS at 3-3/4 ips
Equalization	Correct equalization for playback of tapes recorded to the NAB curve
Frequency Response	Using low noise tape 30 Hz to 26,000 Hz (±3 dB) at 7-1/2 ips 30 Hz to 20,000 Hz (±3 dB) at 3-3/4 ips Using regular tape 30 Hz to 23,000 Hz (±3 dB) at 7-1/2 ips 30 Hz to 18,000 Hz (±3 dB) at 3-3/4 ips
Distortion	Less than 1.2% (1,000 Hz 0 VU)
Signal-To-Noise Ratio	Better than 57 dB (Tape Selector Circuit activated) Better than 54 dB (Tape Selector Circuit inactivated)
Cross-Talk	Better than 60 dB (monaural) Better than 45 dB (stereo)
Bias Frequency	100 kHz
Heads	(4): Two GX recording/erase combination heads, two GX playback heads.
Motors	(3): One 4/8-pole self-lubricating hysteresis synchronous capstan drive motor; two eddy-current outer-rotor reel drive motors
Fast Forward & Rewind Time	Within 75 secs. using a 1,200 ft tape
Recording Capacity	Two hours stereo recording using a 1,200 ft tape at 3-3/4 ips
Output Jacks	Line(2): 1.23 V (0 VU)/100 Ω (Required load impedance: more than 20 kΩ) Phone(1): 30 mV/8 Ω
Input Jacks	Microphone(2): 0.3 mV/4.7 kΩ Line(2): 50 mV
Din Jack	0.5 V/25 mV
Semi-Conductors	Transistors: 30 Diodes: 22
Power Requirements	100 V to 240 V, A.C., 50/60 Hz
Power Consumption	110 W max.
Dimensions	446(W) x 473(H) x 226(D)mm (17.5 x 18.6 x 8.9″)
Weight	20.8 kg (45.8 lbs)

* For improvement purposes, specifications and design are subject to change without notice.

STANDARD ACCESSORIES

Dust Cover(1) Empty Reel(1) Connection Cord(2) Sensing Foil(1) Spare Fuse(1 set) Operator's Manual(1)

* Spare fuses are not included with CEE, CSA, UL, and LA Standard models.

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TROUBLE SHOOTING CHART

The conditions listed below do not indicate mechanical failure of your unit. If your machine exhibits any of these conditions, check for trouble as indicated.

SYMPTOM	TROUBLE	REMEDY
Loss of sensitivity and tone quality.	* Dirty Erase Head.	* See HEADS SHOULD ALWAYS BE KEPT CLEAN.
	* Wrong side of tape facing the heads.	
	* A.C. power lower than the voltage to which your machine is adjusted.	* See VOLTAGE & CYCLE CONVERSION.
	* Magnetized head.	* See HEAD DEMAGNETIZING.
	*Tape Selector Switch is set incorrectly.	
Machine will not record or playback.	* Check positions of controls and input/output.	
	* Check position of the Recording Safety Button.	
	* Check position of the Automatic Stop Lever.	
Irregularity in tape transport.	* Oil or magnetic particles adhering to the Capstan or Pinch Wheel.	* See PINCH WHEEL & CAPSTAN CLEANING.
	* Sticky or dirty tape surface.	
	* Improperly loaded tape.	* See HOW TO LOAD A MAGNETIC TAPE.
	* A.C. power lower than the voltage to which your machine is adjusted.	* See VOLTAGE & CYCLE CONVERSION.
	* Sensing foil is affixed improperly.	* See AUTOMATIC & MANUAL REVERSE PLAYBACK.
Tape will not run.	* Blown fuse.	
	* Power is not being supplied.	* Check power cord, Power Switch, and Automatic Stop Lever.
	* Twisted or sticky tape.	
Previously recorded program will not erase.	* Erase head is dirty.	* See HEAD SHOULD ALWAYS BE KEPT CLEAN.
Distorted or noisy sound.	* Recording level is too high.	* Normal recording level is zero VU.
	* Check external source controls and connections.	

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